# *SPECTRA LABORATORIES - ELECTRONIC DISK DELIVERABLE REPORT*
# *PERSONAL AIR MONITORING*

Point Ruston completes personal air monitoring (Exposure Evaluations) as per WAC 296-848-20060.

The Permissible Exposure Limits for inorganic arsenic is 10 µg/m$^3$. The Action Level for inorganic arsenic is 5 µg/m$^3$ avaraged over an 8-hour period.

The Permissible Exposure Limit for lead is 50 µg/m$^3$. The Action Level for lead is 30 µg/m$^3$ averaged over an 8-hour period.

A result of "<0.004" indicates that an exposure (if any) was below the detection level of the laboratory equipment.

## TABLE LEGEND

**CLIENT ID:**

The sampling cassettes are numbered using a combination of the pump number and date of sample (i.e. a cassette attached to pump # 181 on February 27, 2009 would have a Client ID of, 022709-181)

**CLIENT PROJECT:**

Describes the name, location or type of project.

**SPECTRA Project #:**

Unique number assigned by laboratory comprized of [YEAR] [MONTH] & [SEQUENTIAL NUMBER FOR THE MONTH] . Example 2009040089 = The 89th sample batch received in the month of April, 2009. A Project number is given to each batch of samples received.

**Matrix:**

Type of media used to obtain a sample. Air samples typically use some type of filter media. For Personal Air Monitoring Point Ruston uses Mixed Cellulose Ester (MCE), 0.8µm, 37mm, 3piece, Pre-Banded, Preloaded Cassettes. MCE filters are Hydrophilic, autoclavable, standard filters for fibers and metals. MCE filters also meet NIOSH and OSHA method specifications for monitoring airborne metals, asbestos, and fibers. 0.8µm refers to the pore size. 37mm refers to the diameter. The filters are preloaded in a 3-piece clear plastic cassette with a white shrink wrap band for recording the client ID.

**Date Sampled:**

The date of sampling. Typically this is the date the sample begins. For example: A filter started on 4/1/09 at 22:00 and stopped on 4/2/09 at 06:30 is dated "4/1/09".

**Date Analyzed:**

This is the date the laboratory analysis is completed.

**Method:**

The analitical method used to process the samples .

**SW846:** The EPA publication SW-846, entitled Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, is Waste's official compendium of analytical and sampling methods that have been evaluated and approved for use in complying with the RCRA regulations. SW-846 functions primarily as a guidance document setting forth acceptable, although not required, methods for the regulated and regulatory communities to use in responding to RCRA-relate sampling and analysis requirements.

**6020A:** Inductively Coupled Plasma -- Mass Spectrometry. For more information visit: http://www.epa.gov/osw/hazard/testmethods/sw846/index.htm.

**Analyte Compound:**

The name of the compound being analyzed. "Digestion" refers to a laboratory procedure during the preparation of the sample for analysis.

**Results:**

The measured quantity of the listed Compound (As, Pb, etc). Measured in Parts Per Million (ppm) or Micrograms per cubic meter (µg/m$^3$). See also, "Units" below. A result of <0.004 means the compound was not detected (See Also "Data Qualifiers").

**Data Qualifiers:**

| | |
|---|---|
| B = | Used when the analyte is found in the associated blank, as well as in the sample. |
| E = | Indicates an estimated value. Used when the analyte concentration exceeds the upper end of the linear calibration range. |
| J = | Indicates an estimated value. Used when the analyte concentration is below the method reporting limit (MRL) and above non-detect. |
| U = | Indicates the compound was analyzed and not detected. |

**Units:**

The sampling equipment records the volume of air that travel through the filter media. The laboratory calculates the amount of compound collected by the filter media per cubic meter of air. The results are reported as micrograms per cubic meter (µg/m3). The laboratory equipment can detect down to 0.004 µg/m3.

**$TWA_8$:**

8-hour Time Weighted Averages ($TWA_8$) - are an average value of exposure over the course of an 8 hour work shift. A Permissible Exposure Limit (PEL) is the maximum amount or concentration of a chemical that a worker may be exposed to under OSHA regulations. An employee's exposure to arsenic (As) in any 8-hour work shift of a 40-hour work week, shall not exceed the 8-hour time weighted average ($TWA_8$) of 10 µg/m$^3$. An employee's exposure to lead (Pb) in any 8-hour work shift of a 40-hour work week, shall not exceed the 8-hour time weighted average ($TWA_8$) of 50 µg/m$^3$. TWA levels are usually lower than ceiling values. Thus, a worker may be exposed to a level higher than the TWA for part of the day (but still lower than the ceiling value) as long as he is exposed to levels below the TWA for the rest of the day. See OSHA Regulations (Standards - 29 CFR) 1910.1000 for the formulas used in the calculations.

**Phase:**

This would be the phase of construction or type of work being monitored.

**Company:**

Company or subcontractor for which the participating worker is employed.

| CLIENT ID | CLIENT PROJECT | SPECTRA Project # | Matrix | Date Sampled | Date Analyzed | Method | Analyte Compound | Result | Data Qualifiers | Units | $TWA_8$ | Units | Phase | Company |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

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| CLIENT ID | CLIENT PROJECT | SPECTRA Project # | Matrix | Date Sampled | Date Analyzed | Method | Analyte Compound | Result | Data Qualifiers | Units | $TWA_8$ | Units | Phase | Company |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 031910-719 | Stock Pile "F" Placement | 2010030435 | Air Cassette Filter | 3/19/2010 | 3/23/2010 | SW846 6020A | Arsenic | < 0.004 | U | µg/m³ | < 0.00379 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 031910-719 | Stock Pile "F" Placement | 2010030435 | Air Cassette Filter | 3/19/2010 | 3/23/2010 | SW846 6020A | Lead | 0.630 | | µg/m³ | 0.59645 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 031910-646 | Stock Pile "F" Placement | 2010030435 | Air Cassette Filter | 3/19/2010 | 3/23/2010 | SW846 6020A | Arsenic | 0.560 | | µg/m³ | 0.53228 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 031910-646 | Stock Pile "F" Placement | 2010030435 | Air Cassette Filter | 3/19/2010 | 3/23/2010 | SW846 6020A | Lead | 1.400 | | µg/m³ | 1.33069 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 031910-181 | Stock Pile "F" Placement | 2010030435 | Air Cassette Filter | 3/19/2010 | 3/23/2010 | SW846 6020A | Lead | 4.700 | | µg/m³ | 4.43222 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 031910-181 | Stock Pile "F" Placement | 2010030435 | Air Cassette Filter | 3/19/2010 | 3/23/2010 | SW846 6020A | Arsenic | 3.100 | | µg/m³ | 2.92338 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 032310-181 | Stock Pile "F" Placement | 2010030486 | Air Cassette Filter | 3/23/2010 | 3/25/2010 | SW846 6020A | Arsenic | 0.031 | | µg/m³ | 0.03351 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 032310-181 | Stock Pile "F" Placement | 2010030486 | Air Cassette Filter | 3/23/2010 | 3/25/2010 | SW846 6020A | Lead | 0.044 | | µg/m³ | 0.04757 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 032310-123 | Stock Pile "F" Placement | 2010030486 | Air Cassette Filter | 3/23/2010 | 3/25/2010 | SW846 6020A | Arsenic | 0.110 | | µg/m³ | 0.11707 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 032310-123 | Stock Pile "F" Placement | 2010030486 | Air Cassette Filter | 3/23/2010 | 3/25/2010 | SW846 6020A | Lead | 0.120 | | µg/m³ | 0.12772 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 032310-646 | Stock Pile "F" Placement | 2010030486 | Air Cassette Filter | 3/23/2010 | 3/25/2010 | SW846 6020A | Arsenic | 0.170 | | µg/m³ | 0.17895 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 032310-646 | Stock Pile "F" Placement | 2010030486 | Air Cassette Filter | 3/23/2010 | 3/25/2010 | SW846 6020A | Lead | 0.210 | | µg/m³ | 0.22105 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 032310-719 | Stock Pile "F" Placement | 2010030486 | Air Cassette Filter | 3/23/2010 | 3/25/2010 | SW846 6020A | Arsenic | 0.024 | | µg/m³ | 0.02566 | µg/m³ | Soil Placement | Point Ruston, LLC |
| 032310-719 | Stock Pile "F" Placement | 2010030486 | Air Cassette Filter | 3/23/2010 | 3/25/2010 | SW846 6020A | Lead | 0.033 | | µg/m³ | 0.03528 | µg/m³ | Soil Placement | Point Ruston, LLC |